

BUILD COLLABORATIVE CRITICAL TEST RESULTS(CTRs) RECALLING PLATFORM TO PROMOTE EFFECTIVELY DISCHARGE PATIENTS RETURNING TREATMENT

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INTRODUCTION

Changhua Christian Hospital Scale

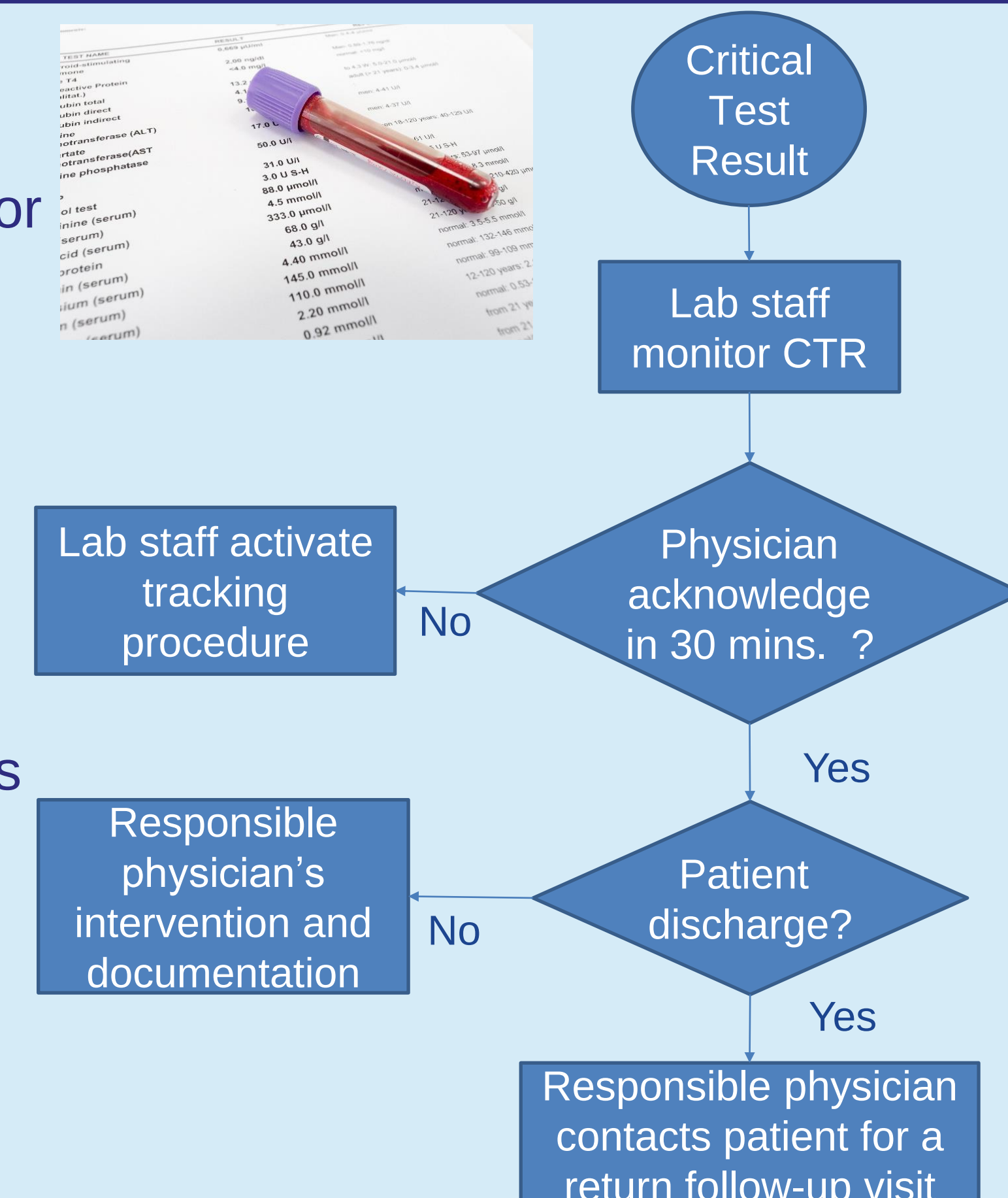
- Changhua Christian Hospital (CCH) was founded in 1896.
- Central Taiwan Medical Center, with 1,655 beds
- 7 regional branch hospitals.
- Approved by College of American Pathologists (CAP) accreditation.
- 1,514,316 outpatient visits, 48,638 discharges, 80,250 emergency visits, in 2022.



AIM

Critical Test Report Follow-up Process

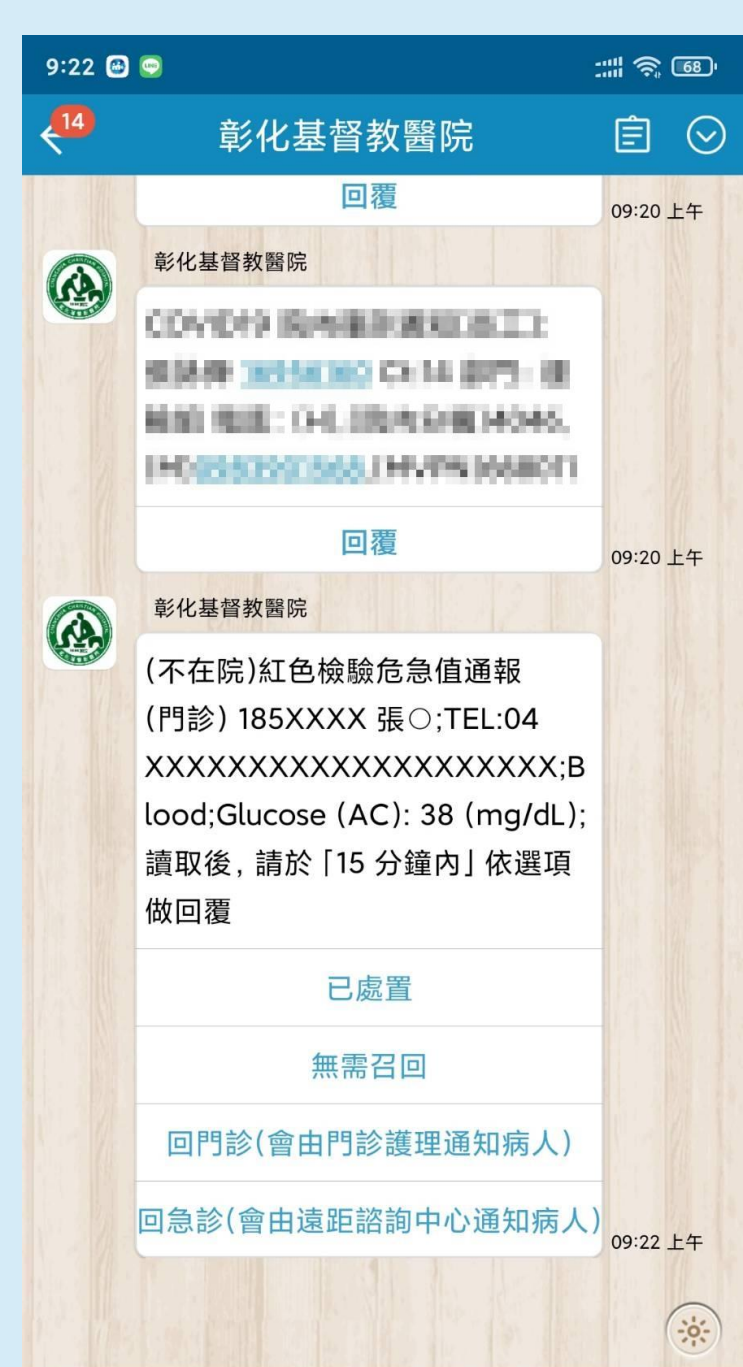
- 60 CTRs listed based on the risks of clinical operation requirement (e.g., severe hyperglycemia or hypoglycemia (glucose ≥ 600 mg/dL or ≤ 40 mg/dL), hyperkalemia or hypokalemia (K ≥ 6.2 mmol/L or ≤ 2.5 mmol/L); aortic dissection and pneumothorax as revealed by radiology)
- CTR notifications for 9,336 patients (52.6% inpatients, 5.5% outpatients, and 41.9% emergency visits) 15.6% discharge CTRs Problem
- Recall rate of discharged patient within 5 days with critical results is 56.5% in 2020
- Physicians are not able to distinguish discharge from critical test report notifications
- Unable to link patient contact information as recalled.
- Lack of comprehensive follow-up information of patients



METHOD

Enhance CTRs recall supporting system

- Build CTR smartphone feedback system reporting CTRs (laboratory, imaging, and cardiac diagnostics) notifying responsible physicians to take prompt actions, within time frame and document information
- Timely notifications and link patient clinical and contact information to determine discharge patient recall requirement, activate responsible medical care team for recalling patients
- Responsible medical care team based on notification to contact and instruct the patient to return hospital for intervention, improving the willingness of the patient recall.
- Notes patient return visit time to follow-up patient whether or not return hospital on time.



CTR smartphone feedback options for physician



Responsible medical care team recall patient

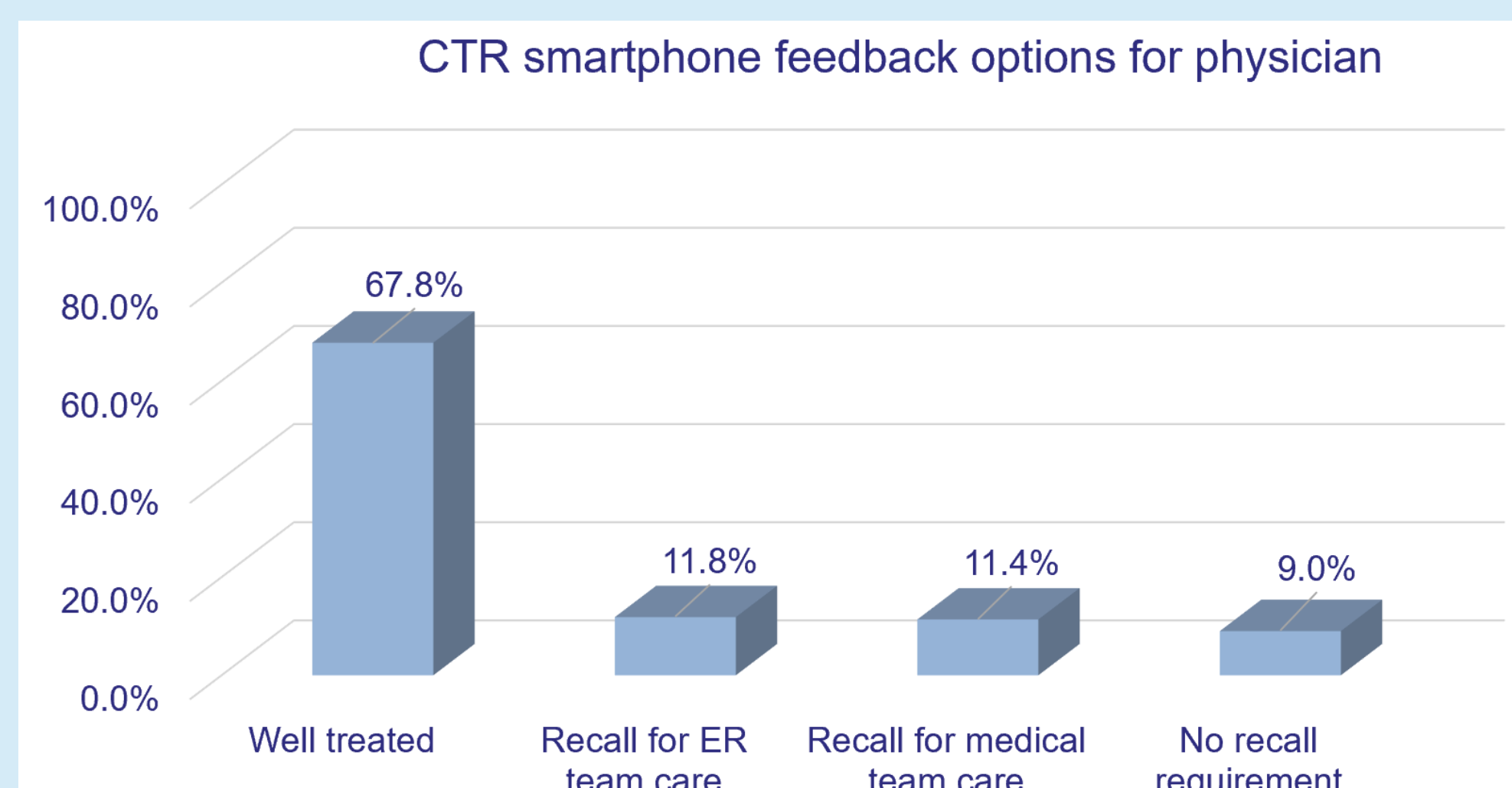
(Discharge) critical test result outpatient 185XXXX Joe; contact 04-723XXXX Blood Glucose (AC): 38 (mg/dL); please feedback the following options within 15 min.
Well treated
No recall requirement
Recall for medical team care
Recall for ER team care

CONCLUSIONS

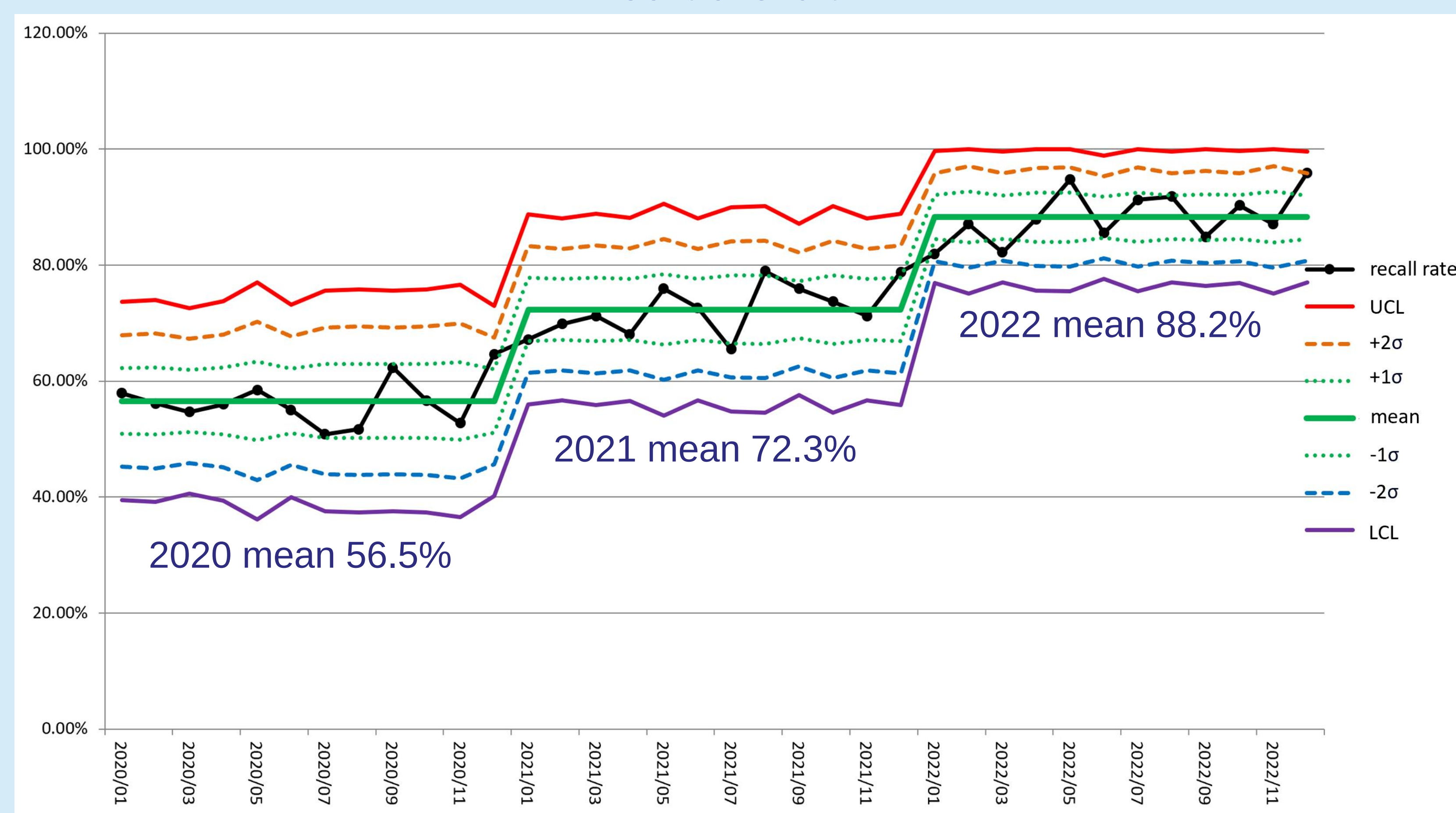
- The collaborative CTR recalling platform improves the rate of return of CTR discharge patients within 5 days. It is helpful for preventing the healthcare risk of neglecting or delayed intervention for CTRs.
- Enhance smartphone feedback system significantly improves the willingness of the patient recall.
- The Critical Test Report initiatives of a return follow-up in the hospital must be customized according to the conditions of the disease to help the responsible medical care team make quick and proper clinical Critical Test Report decisions to treat discharge patients.

RESULTS

- Our the rate of return of discharge patients within 5 days was 56.5% in 2020, we implemented these measures in 2021 and improved to 72.3%.
- In 2022, it increased to 88.2% for preventing the healthcare risk of neglecting or delayed intervention of discharge patient CTRs treatment.
- Recall rate of discharged patient with critical results from 56.5%, improved up-to 88.2%. increased by 31.7% with significant change (P < 0.001)
- There is still 11.8% gap required to be filled, which allow us to develop more security, friendly and accurate recalling measures, to assure discharge patient recall and return.
- CTR smartphone feedback options for physician is well treated 67.8%, Recall for ER team care 11.8%, Recall for medical team care 11.4% and No recall requirement 9.0%.



Recall rate of discharged patient within 5 days with critical results Control Chart



REFERENCES

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